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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,706	04/04/2001	Yatin R. Acharya	95-391	1771
20736	7590	11/01/2004	EXAMINER	
MANELLI DENISON & SELTER 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307			KNOLL, CLIFFORD H	
			ART UNIT	PAPER NUMBER
			2112	

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/824,706

### Applicant(s)

ACHARYA ET AL.

### Examiner

Clifford H Knoll

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. *Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fung (US 6243778) in view of common serial packet interface standards, as evidenced by Aguilar (US 6199137).*

Regarding claim 1, Fung discloses storing in a table each access cycle by a retransmission manager entries identifying respective packets having been transmitted during the corresponding access cycle according to a service protocol requiring an acknowledgement receipt within a prescribed time interval (e.g., col.10, lines 66-67), resetting an acknowledgement waiting bit for a selected one of the entries by an acknowledgement manager (e.g., col.11, lines 9-12), and transferring the entries having a determined absence of the reset stored acknowledgement waiting bit upon expiration of the prescribed time interval to a transmit queue for retransmission (e.g., col.11, lines 4-5). Fung discloses the use of his system for serial packet protocols (e.g., col. 1, lines 48-50, 52-54, col. 3, lines 1-9, 15-29, claim 1) but fails to expressly mention the Infiniband as a particular serial packet bus; however, the availability of Infiniband as a

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serial bus is well established as, for example, evidenced by Aguilar, who discloses the instance of Infiniband as a particular serial bus protocol. It would be obvious to combine Infiniband protocol to Fung's serial packet protocol invention because of the clear advantages of using a widely adopted serial packet bus interface standard in practicing an invention directed to a serial packet bus interface. Therefore it would have been obvious to one of ordinary skill in the art to combine the Infiniband protocol to Fung's serial packet bus interface invention to obtain the claimed invention.

Regarding claim 2, Fung also discloses counting during each access cycle a number of the packets having been transmitted during the corresponding access cycle (col.11, lines 6-8).

Regarding claim 3, Fung further discloses accessing the entry for the first of the packets transmitted during an access cycle having passed the expiration of the prescribed time interval and determining whether the accessed entry includes a reset acknowledgement waiting bit (e.g., col.11, lines 3-5).

Regarding claim 4, Fung still further discloses transferring the accessed entry and selected subsequent entries based on the counted number stored in the accessed entry to the transmit queue, independent of whether the selected subsequent entries have respective reset acknowledgement waiting bits (e.g., col.11, lines 52-64).

Regarding claim 5, Fung still further discloses deleting entries having passed beyond the expiration of the prescribed time interval (e.g., col.17, lines 41-50).

Regarding claim 6, Fung further discloses identifying entries for transfer based on the counted number stored in the entry (e.g., col.11, lines 4-5).

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Regarding claim 7, Fung also discloses wherein each access cycle is defined by a prescribed number of clock cycles (e.g., col.10, lines 66-67).

Regarding claim 8, Fung discloses a table configured for storing entries identifying respective packets having been transmitted according to a service protocol requiring an acknowledgement message receipt within a prescribed time interval and an acknowledgement waiting bit (e.g., col.11, lines 9-12), a transmit queue (e.g., col.10, lines 63-65), an acknowledgement manager configured for resetting the acknowledgement waiting bit for a selected one of the entries (e.g., col.11, lines 4-5), the retransmission manager configured for storing in the table each access cycle the entries identifying the respective packets having been transmitted during the corresponding access cycle, and transferring the entries having a determined absence of the reset acknowledgement bit upon expiration of the prescribed time interval from the table to the transmit queue (e.g., col.17, lines 41-50). Fung discloses the use of his system for serial packet protocols (e.g., col. 1, lines 48-50, 52-54, col. 3, lines 1-9, 15-29, claim 1) but fails to expressly mention the Infiniband as a particular serial packet bus; however, the availability of Infiniband as a serial bus is well established as, for example, evidenced by Aguilar, who discloses the instance of Infiniband as a particular serial bus protocol. It would be obvious to combine Infiniband protocol to Fung's serial packet protocol invention because of the clear advantages of using a widely adopted serial packet bus interface standard in practicing an invention directed to a serial packet bus interface. Therefore it would have been obvious to one of ordinary skill in the art to

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combine the Infiniband protocol to Fung's serial packet bus interface invention to obtain the claimed invention.

Regarding claim 9, Fung also discloses comprising a counter configured for counting during each access cycle a number of the packets having been transmitted during the corresponding access cycle according to the service protocol (e.g., col.11, lines 4-5), inserting the counted number into a number of packets field within the entry corresponding to a first of the packets transmitted during the corresponding access cycle (e.g., col.11, lines 6-14).

Regarding claim 10, Fung also discloses accessing the entry for the first of the packets having been transmitted during an access cycle having passed the expiration of the prescribed interval, the retransmission manager transferring the accessed entry and selected subsequent entries based on the counted number stored in the accessed entry and identifying that the corresponding acknowledgement waiting bit has not been reset (e.g., col.11, lines 1-12).

Regarding claims 11 and 12, Fung also discloses the storing into the table after the defined prescribed number of clock cycles (e.g., col. 14, lines 35-39, "delay").

Regarding claim 13, Fung discloses the adapter integrated as an application specific integrated circuit (e.g., col. 10, lines 66-67).

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***Response to Arguments***

2. *Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.*

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 571-272-3636. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



chk

Khanh Dang  
Primary Examiner